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PRESS RELEASE

Baker-Polito Administration Announces Advanced Manufacturing Awards

Nearly $900,000 in Massachusetts Manufacturing Innovation Initiative grants support projects at UMass Lowell and Worcester Polytechnic Institute

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Executive Office of Housing and Economic Development

Office of Governor Charlie Baker and Lt. Governor Karyn Polito

Massachusetts Technology Collaborative

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WORCESTER — Today, the Baker-Polito Administration announced four new grants worth $892,699 from the **Massachusetts Manufacturing Innovation Initiative (M2I2)** (https://m2i2.masstech.org/mass-manufacturing-innovation-initiativehttps:/m2i2.masstech.org/) to invest in innovative advanced manufacturing projects across the state. Lt. Governor Karyn Polito was joined by Secretary of Housing and Economic Development Mike Kennealy to announce the awards at Worcester Polytechnic Institute (WPI), which was awarded funds for a robotics training program for kids. Three collaborative projects led by research teams at University of Massachusetts Lowell also received grant funding.

The Baker-Polito Administration has committed more than $100 million in funding to the M2I2 program, which allows the Commonwealth to co-invest in projects that are supported by the national **Manufacturing USA initiative** (https://www.manufacturingusa.com/institutes) in order to promote innovation and job growth across the state. M2I2 supports critical research and development infrastructure and workforce programs in four key sector-focused manufacturing institutes: **NextFlex** (https://www.nextflex.us/about/) (flexible hybrid electronics), **AIM Photonics** (https://aimphotonics.academy/) (integrated photonics), **ARM** (http://arminstitute.org/) (robotics), and Cambridge-based **AFFOA** (http://go.affoa.org/) (advanced functional fabrics). To date, the M2I2 program has awarded more than $50 million to advanced manufacturing projects throughout Massachusetts.

"Our administration is proud to support programs like M2I2 that help Massachusetts maintain its status as the home of the world's leading innovation economy," **said Governor Charlie Baker.** "These grants are strategic investments in the future of the Commonwealth that will help continued development of cutting-edge infrastructure at our universities, provide training opportunities, and advance life-changing R&D collaboration between the public and private sector while driving growth statewide."

“The manufacturing industry has been a crucial component of our state’s economy for years, and our administration remains committed to supporting its growth through the Massachusetts Manufacturing Initiative,” **said Lt. Governor Karyn Polito.** “Today’s awards will prime our manufacturing industry for tomorrow, helping innovative firms grow while providing students with invaluable opportunities to learn on the same machines they will use in the workforce. We congratulate today’s awardees and welcome their contributions to the Commonwealth.”

“The economy is booming in Massachusetts, thanks in no small part to the pioneering research and manufacturing conducted at our world-class institutions that change lives around the world,” **said Secretary of Housing and Economic Development Mike Kennealy.** “We will continue to support the growth of this industry and look forward to the impact today’s awardees will make on their host communities and this dynamic innovation ecosystem.”

During her remarks at WPI, the Lt. Governor announced $892,699 in M2I2 grants to four projects, including:

$303,000 for “Small Unmanned Aircraft Systems (SUAS) Using Hybrid Flexible Electronics,” led by UMass Lowell. UMass Lowell will work with Lockheed Martin to utilize flexible electronics to lower the overall weight and add communication functionality to drones. The resulting wireless devices and systems can be applied to other electronics, supporting the Commonwealth’s leadership in this area. The project is supported by NextFlex.

$201,600 for the project “Application-Responsive Encapsulation Processes for FHE [Flexible Hybrid Electronic] Devices,” led by UMass Lowell, in collaboration with Eastman Chemical Company, Lockheed Martin, and Acellent Technologies. The project aims to create new methods and materials to encapsulate flexible hybrid devices, which will improve performance and increase their commercial value, processes which will benefit all Massachusetts companies working on FHE devices. This project is also supported by NextFlex.

$305,700 for “Textile with Embedded and Printed Sensors (STEPS) Expanded Multi-Mission Operation,” led by UMass Lowell in partnership with Boeing. The STEPS project will develop a functional textile which can monitor aircraft wings and similar structures during production, one of the longest processes in the production of commercial aircraft. Advanced monitoring is expected to reduce the production time by 50 percent, which could translate to millions of dollars in savings per plane. The project is also supported by NextFlex.

$82,300 for “Cobots for Kids,” led by WPI, with MassMEP, Quinsigamond Community College, and Worcester-area public schools. The project will develop, test, and deploy a curriculum for summer and after-school programs targeted at middle and high school students, which includes hands-on experience and training in collaborative robotics. The project will help prepare the next generation of advanced manufacturing employees with the skills they need to succeed, while also providing opportunities for two- and four-year college students to become program instructors themselves. The project is supported by both WPI and the national ARM institute.

“These awards highlight the strong partnerships that are critical for both the M2I2 program and the Manufacturing USA program, and build on the Commonwealth’s unique R&D strengths,” **said Ira Moskowitz, Director of Advanced Manufacturing Programs at the Massachusetts Technology Collaborative, the program manager for M2I2.** “Each of these projects has been selected for the positive impact they will have on our advanced manufacturing ecosystem, from workforce training programs, to new manufacturing process development, and additional equipment that will keep the Commonwealth at the forefront of the innovation economy.”

“UMass Lowell is grateful for the support of the Baker-Polito Administration for these projects, which will help our faculty and student researchers utilize their expertise in collaboration with our company partners – Lockheed Martin, Boeing, Saint Gobain, Eastman Chemical and Accellent – to advance the emerging field of flexible electronics and in turn, benefit the Massachusetts economy,” **said Julie Chen, UMass Lowell vice chancellor for research and economic development.**

"K-12 robotics programs have proven to be remarkable pathways for young people into the STEM disciplines in higher education, and now Cobots for Kids will aim to generate interest and passion for robotics in advanced manufacturing," **said Dr. Laurie Leshin, President, WPI.** "Working closely with our partners, we will develop an innovative curriculum geared towards simultaneously opening the doors to rewarding STEM careers, building a talent pipeline, and powering our regional economy for years to come."

According to **Manufacturing in Massachusetts** (https://www.mamanufacturing.com/), 10 percent of the Commonwealth's total economic output is tied to manufacturing, and Massachusetts companies exported $26 billion in manufactured goods in 2016 alone. Roughly 250,000 employees work in the Commonwealth's manufacturing sector, comprising 7.8 percent of the total workforce in the state.

"This grant funding will support many exciting opportunities for students, manufacturers and the regional economy**," said Senator Michael O. Moore (D-Millbury).** "Central Massachusetts is the birthplace of the American Industrial Revolution and this grant funding seeks to address the very real need for expanded advanced manufacturing educational opportunities in the region. I commend the Administration for their efforts to bring this this grant program to fruition."

"Robotics represents an open-source world of innovation that is an accessible way to start understanding the complex systems of manufacturing and coding and so many other vital fields," **said Worcester Mayor Joseph M. Petty.** "I want to thank the Governor, Lieutenant Governor and Secretary Kennealy for investing in the City of Worcester, in WPI, and the future of innovation in our Commonwealth."

In January 2019, Lt. Governor Karyn Polito **announced $3.7 million in M2I2 grants** (http://m2i2.masstech.org/press-releases/baker-polito-administration-announces-over-37-million-spur-innovation-advanced) during an event at Sheaumann Laser in Marlborough, and Governor Baker announced **$7 million in M2I2 grants during the ribbon cutting event for UMass Lowell's Fabric Discovery Center** (https://www.uml.edu/news/newsline/2018/fdc.aspx) in July 2018. In addition to being the national home for AFFOA, the Commonwealth's investments through M2I2 in the flexible-hybrid electronics manufacturing space **led to the formation of the NextFlex Massachusetts Node** (https://www.nextflex.us/news-events/news/nextflex-announces-two-affiliated-nodes-to-further-support-growing-fhe-community-in-massachusetts-and-new-york/), a move that will help accelerate the development of the manufacturing workforce and promote sustainable advanced manufacturing ecosystems.

To learn more about the M2I2 program, including how Massachusetts manufacturers can apply for grants, visit **https://m2i2.masstech.org/** (https://m2i2.masstech.org/).

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About M2I2:

Launched by the Baker-Polito Administration in 2016, the **Massachusetts Manufacturing Innovation Initiative (M2I2)** (https://m2i2.masstech.org/) aims to help Massachusetts manufacturers adopt innovative new technologies and guides the state's investment in the Manufacturing USA program. The Administration has committed $100 million-plus in funding to support M2I2 projects across the Commonwealth; the investments are managed by the Massachusetts Technology Collaborative. Through the creation of sector-specific Manufacturing USA Centers, M2I2 will advance innovation and job growth throughout the state through cross-collaboration among companies, universities, national labs, government, incubators, accelerators, and other academic and training institutions.

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